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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/192,474	11/17/1998	AKIO TANAKA	NEC98P175-HI	9819

7590 10/16/2002

MCGINN & GIBB  
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ARLINGTON, VA 22209

EXAMINER

SPEARS, ERIC J

ART UNIT PAPER NUMBER

2878

DATE MAILED: 10/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

nk

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/192,474	TANAKA, AKIO	
	Examiner	Art Unit	
	Eric J Spears	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 1998.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION*****Specification***

✓ The disclosure is objected to because of the following informalities: On page 6, line 22, "several tens %" is awkward and should read something like --several tens of %--. On Page 15, line 26, the formula appears to be misprinted. The term  $(qV_{BE}/kT)$  is not unitless and it is therefore assumed that the formula should read  $I_b = m I_{B_0} \text{Exp}[qV_{BE}/kT]$ . On Page 17, line 16, it is not understood what  $K^{1/2}$  means. On Page 18, line 25, "dependence" should read -- dependent--. Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20 and 21 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to

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✓ make and/or use the invention. The specification does not define what is meant by "MSB" and "LSB". The specification is therefore not enabling.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

✓ Claim 1, Line 5 recites the limitation "said detector". There is insufficient antecedent basis for this limitation in the claim.

✓ Regarding Claims 11-14, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 11 recites the

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broad recitation "said resistance ranges from 1 k $\Omega$  to 500 k $\Omega$ ", and the claim also recites "said resistance ranges... from 5 k $\Omega$  to 100 k $\Omega$ " which is the narrower statement of the range/limitation.

✓ Regarding Claims 20 and 21, it is not understood what "MSB" and "LSB" are intended to mean. Therefore, the scope of the claims in which these terms appear can not be determined.

✓ Regarding Claim 22, line 6 recites the limitation "said detector". There is insufficient antecedent basis for this limitation in the claim.

✓ Further regarding Claim 22, lines 6-7 recites the limitation "the associated detector". There is insufficient antecedent basis for this limitation in the claim.

✓ Further regarding Claim 22, line 9 recites the limitation "each column direction". There is insufficient antecedent basis for this limitation in the claim.

✓ Further regarding Claim 22, on line 10, "source" should read --sources--.

✓ Further regarding Claim 22, line 11 recites the limitation "said read-out circuit". There is insufficient antecedent basis for this limitation in the claim.

✓ Further regarding Claim 22, on line 15, the use of "date" is not understood.

✓ Further regarding Claim 22, line 16 recites the limitation "said regulated constant-current source". There is insufficient antecedent basis for this limitation in the claim.

✓ Further regarding Claim 22, line 18 recites the limitation "said read-out circuit". There is insufficient antecedent basis for this limitation in the claim.

✓ Further regarding Claim 22, line 22 recites the limitation "the respective rows". There is insufficient antecedent basis for this limitation in the claim.

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Claims not mentioned are indefinite due to their dependency from an indefinite base claim.

No art has been applied to Claims 11-14, and 20-22 as the scope of the claims is so unclear.

### ***Allowable Subject Matter***

Claim 1 appears as if it would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 2-10, and 15-19 appear as if they would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaka et al. (6,037,577) shows an image pickup device with noise suppression.

Koyama (5,990,951) shows an imaging device with constant current sources.

Noda et al. (4,333,111) shows an imaging device with constant current sources.

Soneda et al. (4,463,383) shows an imaging device with constant current sources.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Spears whose telephone number is (703) 306-0033. The examiner can normally be reached on Monday-Friday from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (703) 308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

EJS  
10/08/02

  
STEPHONE ALLEN  
PRIMARY EXAMINER